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(71) Applicant (for all designated States except US): **AVALON PHOTONICS AG** [CH/CH]; Badenerstrasse 569, CH-8048 Zurich (CH).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **ROYO, Paul** [CH/CH]; Doeltschihalde 29, CH-8055 Zurich (CH).

(74) Agent: **PFAU, Anton**; Grünecker, Kinkeldey, Stockmair & Schwanhäusser, Maximilianstrasse 58, 80538 München (DE).

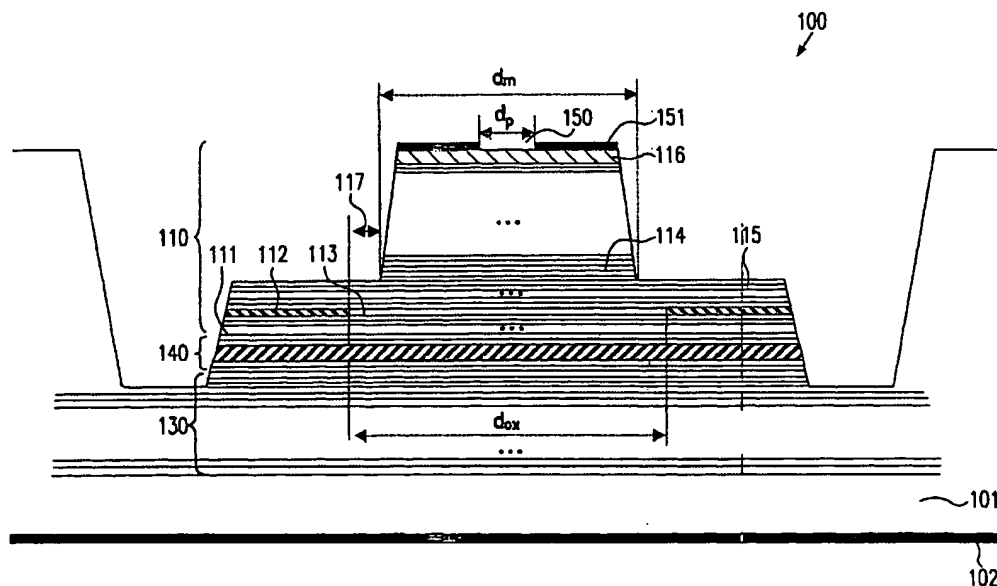
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(54) Title: A VERTICAL HAVING IMPROVED TRANSVERSE MODE CONTROL BY OPTIMIZING THE INCREASED OXIDE APERTURE RELATIVE TO THE LASER DIMENSIONS



(57) Abstract: The present invention provides a VCSEL device (100) and a method of fabricating the same, wherein two or more characteristic device dimensions (DM, DP) are correlated with each other so as to optimise single mode emission, while at the same time significantly providing an increased oxide aperture (DOX) compared to conventional devices. Thus, device lifetime and reliability are enhanced. The present invention may rely on well-established process techniques for VCSEL devices having an oxide aperture (DOX), wherein merely one additional mesa etch step is required.